

REMARKS

Applicants acknowledge, with appreciation, the allowance of claims 15 and 18, as well as the indication that claims 17 and 19 contain allowable subject matter. Claims 10-19 are pending in this application, with claims 10, 13, and 15 being the only independent claims. Claims 10 and 13 have been amended. Reconsideration of the application in view of the above amendments and the following remarks is requested.

In the Office Action mailed September 19, 2007, the Examiner required under 37 C.F.R. §1.72(b) that an Abstract on a separate sheet be filed (Office Action, page 2). Applicants note that the present application is a U.S. national stage application of international stage PCT application No. PCT/EP2004/050979, a published pamphlet version of which was included in the filing papers of this national stage application as WO 2005/01690. The abstract appeared on the cover sheet of the published pamphlet version of the PCT application. As stated at §1893.03(e) of the MPEP (emphasis added):

When the international application is published as the pamphlet, the abstract is reproduced on the cover page of the publication, even though it appears on a separate sheet of the international application in accordance with PCT Rule 11.4(a). Thus the requirement of 37 C.F.R. §1.52(b) that the abstract "commence on a separate sheet" does not apply to the copy of the application (pamphlet) communicated to the designated Offices by the International Bureau under PCT Article 20. Accordingly, it is improper for the examiner of the U.S. national stage application to require the applicant to provide an abstract commencing on a separate sheet if the abstract does not appear on a separate sheet in the pamphlet. Unless the abstract is properly amended under the U.S. rules during national stage processing, the abstract that appears on the cover page of the pamphlet will be the abstract published by the USPTO under 35 U.S.C. §122(b) and in any U.S. patent issuing from the application.

Therefore, in the present national stage application, the filing of the original Abstract on a separate sheet is not necessary. Withdrawal of the objection is respectfully requested.

Claims 10-12 stand rejected under 35 U.S.C. §103 as unpatentable over U.S. Patent No. 6,161,196 ("*Tsai*") in view of U.S. Patent No. 4,532,594 ("*Hosaka*"). Claims 13 and 14 stand rejected under 35 U.S.C. §103 as unpatentable over U.S. Patent Application Publication No. 2003/0233635 ("*Corrie*") in view of *Hosaka*. Claim 16 stands rejected under 35 U.S.C. §103 as unpatentable over *Corrie* in view of *Hosaka*, and in further view of U.S. Patent No. 5,347,649 ("*Alderson*"). For the following reasons, reconsideration and withdrawal of these rejections are respectfully requested.

Independent Claim 10

Independent claim 10 has been amended to recite the step of "executing a copy of the program with the input data intended for the program and generating a second output data, the copy being stored in a different address area of the microcomputer than the program in the microcomputer". Accordingly, the copy of the program and the program are stored in different addresses of the same microcomputer. The combination of *Tsai* and *Hosaka* fails to teach or suggest this limitation.

Tsai relates to a method for providing fault tolerance computing in a distributed computing environment. *Tsai* (col. 2, lines 3-7) expressly states that "different copies of a given target program are executed on different machines in the system. Each of the machines executing a copy of the target program includes a controller for controlling the execution of that copy". *Tsai* thus teaches that the different copies of the computer program are stored in different computers, and not within the same computer. Thus, *Tsai* fails to teach or suggest fault tolerance that is performed within a single microcomputer. Rather, *Tsai* teaches that fault tolerance is performed among computers within a distributed computing system.

Hosaka has been cited based on the failure of *Tsai* to teach or suggest “the system for use in a sensor circuit for sensing at least one operating parameter of a motor vehicle”, as recited in independent claim 10. *Hosaka* discloses “an electronic control system for an automotive vehicle including an engine control system for controlling the engine operation using a microcomputer and a vehicle driving information system for preparing and displaying various driving information using another microcomputer” (see Abstract). According to *Hosaka*, “a back up program is assembled into each microcomputer for backing up at least the critical jobs of the partner microcomputer when the partner fails so as to ensure continuing, safe operation of the vehicle” (see Abstract, lines 6-10). *Hosaka* thus teaches a pair of microcomputers that receive signals from external sensors.

However, *Hosaka* fails to cure the deficiency of the system disclosed in *Tsai*, because *Hosaka* also fails to teach or suggest the step of “executing a copy of the program with the input data intended for the program and generating a second output data, the copy being stored in a different address area of the microcomputer than the program in the microcomputer, the copy being stored in a different address area of the microcomputer than the program in the microcomputer”, as recited in now amended independent claim 10. Therefore, independent claim 10 is patentable over the combination of the cited art.

Reconsideration and withdrawal of the rejection of independent claim 10 under 35 U.S.C. §103(a) are therefore in order, and a notice to that effect is respectfully requested.

Independent Claim 13

Independent claim 13 has been amended to recite the steps of “generating, by one of the microcomputers in the sensor circuit, a request which is transmitted to the other microcomputer in the sensor circuit ... returning, by the other of the microcomputers, a response which is dependent on the input data to the one of the microcomputers”. Claim 13 also recites that the sensor circuit

senses at least one operating parameter of a motor vehicle. The combination of *Corrie* and *Hosaka* fails to teach or suggest this limitation because these reference fail to disclose two microcomputers within a sensor circuit.

Corrie relates to a system for automated function verification testing (FVT) test generation that is based on a distributed Java application that runs on more than one computer in a master-slave (client/server) configuration. Since *Corrie* relates to a distributed Java application, *Corrie* fails to teach or suggest that the method is implemented between two microprocessors that are each located within a sensor circuit of a motor vehicle. Rather, *Corrie* teaches that the microprocessors, i.e., the master and slave, communicate over network 300 (see FIG. 1).

Hosaka has been cited based on the failure of *Corrie* to teach or suggest “the two interconnected microprocessors are in a sensor circuit sensing at least one operating parameter of a motor vehicle”, as recited in independent claim 13.

The Examiner (pg. 6 of the Office Action) asserts that:

Hosaka teaches a vehicle control system that uses redundant processors for backup operation while measuring and displaying various vehicle driving information (column 1 lines 29-37).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify redundant program system such that it is used for a vehicle sensor circuit as disclosed by Hosaka ('594).

Applicants respectfully disagree, however, that the combination of *Corrie* and *Hosaka* teaches the invention recited in now-amended claim 13.

Hosaka discloses a “centralized electronic control system for an automotive vehicle having an engine control system using a microcomputer which controls engine operation and a vehicle driving condition information system using another microcomputer which informs a vehicle occupant of the changing conditions of various appliances of the vehicle” (see col. 1, lines 9-16).

According to *Hosaka* (col. 1, lines 29-35 col. 2, lines 10-12; col. 2, lines 18-21) an electronic control system for an automotive vehicle includes an engine control system 1000 (hereafter E/C) which controls engine operation by means of a microcomputer and a vehicle driving information indicating system 2500 (hereafter D/C) which measures and displays various vehicle driving information by means of another microcomputer. *Hosaka* (FIG. 1) "shows a simplified block diagram of a dual microcomputer system with comonitoring and back-up facility for an automotive vehicle".

According to *Hosaka* at col. 2, lines 54-57, "[t]he E/C 1000 and D/C 2500 have substantially the same configuration, i.e., an I/O interface, central processing unit (CPU), read-only memory (ROM), and random-access memory (RAM)". *Hosaka* (col. 2, lines 57-65) explains that "[t]he reason that the E/C and D/C 1000 and 2500 do not use a single microcomputer for a general purpose of control and display over the vehicle but rather use two separate microcomputers for the individual purposes is that if the systems were integrated, the scale of the circuitry would be enlarged due to the greater range of calculation and processing capabilities that would be required".

In all of the foregoing sections of *Hokasa*, however, there is no teaching or suggestion of Applicant's claimed steps of "generating, by one of the microcomputers in the sensor circuit, a request which is transmitted to the other microcomputer in the sensor circuit, and returning, by the other of the microcomputers, a response which is dependent on the input data to the one of the microcomputers in the sensor," as recited in now-amended independent claim 13. What *Hosaka* does show is a pair of microcomputers that receive signals from external sensors. However, the claimed invention is directed to a sensor circuit in a motor vehicle in which a request is transmitted from one microcomputer in a sensor circuit to another microcomputer in the same sensor circuit, wherein the another microcomputer in the same sensor circuit returns a response that is dependent on the input data to one of the microcomputers in the sensor circuit. Accordingly, *Hosaka* fails to

teach or suggest the claimed invention. Moreover, absent impermissible hindsight based on Applicants' disclosure, the skilled person would have no reason to modify the system of *Corrie* based on the teachings of *Hosaka* to thereby place the E/C and D/C within a single component. *Hosaka* (col. 3, lines 1-59) describes various reasons why the E/C and D/C would not be placed within a single component, i.e., a sensor circuit, based on the desire to provide a system that is compact and completely redundant. Thus, the combination of *Corrie* and *Hosaka* fails to teach now-amended claim 13, because *Hosaka* fails to provide what *Corrie* lacks.

The Examiner cites *Alderson* in an attempt to cure the shortcomings of the combination of *Corrie* and *Hosaka*, i.e., the setting or changing steps, as recited in dependent claim 16.

However, *Alderson* fails to cure the deficiency of the system achieved by the combination of *Corrie* and *Hosaka*, because *Alderson* also fails to teach or suggest the generating step and/or the returning step as recited in now amended independent claim 13, or the setting or changing steps as recited in dependent claim 16. Therefore, dependent claim 16 is patentable over the combination of the cited art for at least these additional reasons.

Reconsideration and withdrawal of all the rejections under 35 U.S.C. §103(a) are therefore in order, and a notice to that effect is respectfully requested.

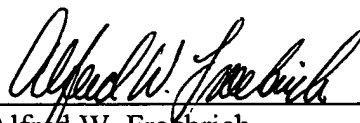
In view of the patentability of amended independent claims 10, 13 and 15, dependent claims 11, 12, 14 and 17-19 are also patentable over the prior art for the reasons set forth above, as well as for the additional recitations contained therein.

Based on the foregoing amendments and remarks, this application is in condition for allowance. Early passage of this case to issue is respectfully requested.

Should the Examiner have any comments, questions, suggestions, or objections, the Examiner is respectfully requested to telephone the undersigned in order to facilitate reaching a resolution of any outstanding issues.

Respectfully submitted,
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